

LIU & LIU
ATTORNEYS AT LAW

NOV 17 2005

CITIGROUP CENTER, SUITE 1750
444 SOUTH FLOWER STREET
LOS ANGELES, CALIFORNIA 90071 USA
TEL: (213) 830-5740
FAX: (213) 830-5741
www.liulaw.com

To: Examiner John A. McPherson**From:** Wen Liu

(GAU 1756) USPTO

Fax: (571) 273-8300**Pages:** 9**Phone:** (571) 272-1386**Date:** November 17, 2005**Re:** Serial No.: 10/773,624**CC:**

Our Docket No.: 1176/201

☒ **Urgent** ☒ **For Review** ☐ **Please Comment** ☒ **Please Reply** ☐ **Please Recycle**

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• Comments:

Please see the attached documents:

1. Notice of Appeal;
2. Pre-Appeal Brief Request for Review;
3. Arguments In Support of Pre-Appeal Brief Request for Review; and
4. Credit Card Payment Form PTO-2038.

NOV 17 2005

Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)	
<i>Facsimile transmitted to the USPTO, on</i>		1176/201	
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Signature <u><i>Wen Liu</i></u>		10/773,624	Feb. 6, 2004
Typed or printed name <u>WEN LIU</u>		First Named Inventor	
		Cheng, Chi-Ming	
		Art Unit	Examiner
		1756	McPherson, John A.
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.			
This request is being filed with a notice of appeal.			
The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.			
I am the		<u><i>Wen Liu</i></u> Signature	
<input type="checkbox"/> applicant/inventor.		<u>WEN LIU</u> Typed or printed name	
<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)		<u>(213) 830-5743</u> Telephone number	
<input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>32,822</u>		<u>November 17, 2005</u> Date	
<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____			
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.			
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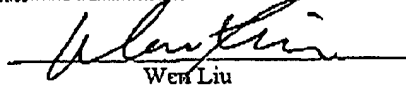
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PATENT
Docket No.: 1176/201**CERTIFICATE OF TRANSMISSION BY FACSIMILE**

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Wen Liu**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the application of:

Cheng, Chi-Ming

Serial No.: 10/773,624

Filing Date: February 6, 2004

For: METHOD OF FABRICATING
SUBSTRATE WITH COLOR FILTER

Examiner: McPherson, John A.

Group Art Unit: 1756

EXPEDITED PROCEDURE**ARGUMENTS IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW****Status of Claims**

Claims 1 and 3-23 remain pending in this application.

Premature Finality of Action

Applicant respectfully requests the finality of the Office Action dated August 19, 2005 be withdrawn.

In the Final Office Action, even though the Examiner relied on the same references, the Examiner apparently presented a new ground of rejection based on a different interpretation of one of the references. Specifically, in an earlier non-final Office Action dated March 21, 2005, the Examiner stated that US '521 discloses utilizing a flattening film for flattening the surface irregularities of the color filter, not planarizing the colored portions with respect to the filled opened portion (e.g., by polishing). In the Final Office Action, however, the Examiner stated a new basis that US '521 also discloses the embodiment wherein deep openings are first filled with a transparent resin, then covered with a flattening film. Applicant had not been given an earlier

opportunity before the Final Office Action to address this new interpretation of US '521. Such new ground of rejection was not necessitated by Applicant's prior amendments. Specifically, in the earlier response filed June 10 2005, Applicant combined the limitations in original dependent claim 2 into claim 1. Since claim 2 was dependent on claim 1, the scope of claim 2 effectively has not been changed. The Examiner recognized the scope of claim 2 in the earlier non-final action, as he specifically referred to the deficiency of US '521 of not planarizing the colored portions with respect to the filled opened portion. The Examiner should have formulated and set forth all the proper basis for relying on the cited references to make rejections in the non-final Office Action. Failure to do so should entitle Applicant an opportunity to respond with further amendments to another non-final action. The finality of the Final Office Action should be withdrawn.

103(a) Rejection based on US '521 and JP 9-230124

The Final Office Action indicates that claims 1, and 3-23 stand rejected under 35 U.S.C 103(a) as being obvious over US 6,501,521 (US '521) in view of JP 9-230124 (JP '124). In the earlier non-final Office Action, the Examiner stated that US '521 discloses utilizing a flattening film for flattening the surface irregularities of the color filter, not planarizing the colored portions with respect to the filled opened portion (e.g., by polishing). In the Final Office Action, however, the Examiner stated that "US '521 also discloses the embodiment wherein deep openings are first filled with a transparent resin, then covered with a flattening film, with reference to column 4, lines 51-54." (Emphasis added by Applicant.)

Applicant respectfully notes that the Examiner misconstrued US '521. US '521 does not disclose first filling deep openings with a transparent resin, and then covering the filled opening with a flattening film. In fact, when column 4, lines 51-54 are read in the context of the rest of the paragraph (column 4, lines 40-60), it is clear that according to US '521, once transparent resin is used to filled openings, uniformity is achieved, without requiring any further steps, such as planarization with or without flattening film, or otherwise. In fact, it has been explicitly stated in US '521, at column 4, lines 40-47: "In the liquid crystal display device of the present invention, it is preferred that the openings of the color filter are filled with a transparent resin whose transmittance is 90% or more. In this way, the step around each color filter opening is eliminated, whereby the liquid crystal molecules rise in a uniform manner in the vicinity of each

color filter opening, thus improving the contrast (particularly the contrast in a reflection mode).” (Emphasis Added.) The disclosure cannot be more specific and clear that with the application of transparent resin, the step has been eliminated in accordance with US ‘521. (The resin filled structure would appear to correspond to the structure of the Fig. 1B referenced in the Background section of the specification of the present application.) US ‘521 goes on to explain that “[a] flattening film made of an acrylic resin is layered on the surface of the color filter for flattening the surface irregularities of the color filter. Thus, when the color filter openings are shallow, the openings are filled with the flattening film. However, when the color filter openings are deep, unless the openings are filled with a transparent resin, the step around each opening cannot be eliminated by the flattening film, thus leaving a step.” It is clear that the flattening film is applied to the surface of the color filter, not the surface of any pre-applied resin. Given the overall context of the US ‘521 disclosure, it effectively teaches away from first filling the color filter openings with resin, and then apply a flattening film. Consequently, there is no teaching, motivation or suggestion if and how the color filter openings can and should be first partially filled with a transparent resin, and then the color filter is covered with a flattening film. The Examiner is essentially requiring one skill in the art to perform mental jumps to consider what could have been done with the prior art disclosure, by applying impermissible hindsight reconstruction given the disclosure of the present invention.

Further, even if the color filter openings are first partially filled with resin and then covered with a flattening film, there is still no motivation or suggestion for planarization of the resultant structure. As noted in Applicant’s previous response and further noted below, JP ‘124 does not make up for the deficiencies of US ‘521, and there is not motivation or suggestion to combine the teachings of US ‘521 and JP ‘124 in the first place. It would not have been obvious to one skill in the art to modify the process disclosed in US ‘521 with the planarization process disclosed in JP ‘124.

JP ‘124 fails to teach color portions being planarized with respect to the filled opening portions. The planarization of the color filter surface in JP ‘124 is in a completely different context. As clearly shown in Figs. 2 and 3 of JP ‘124, the overlapping color filter portion 3A is planarized with respect to adjacent color filter portions 3B and 3R/3G. The planarization of the overlapping color filter portion 3A provides an overall flat surface across the various color filter portions 3R, 3G and 3B, which is completely different from planarizing the color portions with

respect to filled opening portions, as required by the present invention. Consequently, even if JP '124 can somehow be combined with US '521 in the manner suggested only by the Examiner, the combination does not result in the present invention. It would be necessary to make modifications, not taught by the combination, in order to combine the references in the manner suggested by the Examiner.

There is no incentive or motivation to combine US '521 and JP '124 in the first place. It is clear that the cited references do not contain any suggestion (express or implied) that they can and should be combined, and in any specific manner to obtain the claimed invention. As noted above, US '521 does not require planarization of the resin covered structure or the flattening film covered structure. US '521 in effect teaches away from planarization after a flattening film or resin covered structure (claim 5 of the present application specifically requires that planarization step is applied after application of a layer of transparent material).

Further, the references take mutually exclusive paths and reach different solutions to different problems faced by each reference. Specifically, US '521 discloses the use of a transparent flattening film to flatten the surface irregularities caused by openings in the color filter, by filling such openings, or use of a resin to cover the openings to remove the steps around the openings. By application of the flattening layer or filling with resin, the resultant surface is deemed to be acceptable to US '521, without requiring any further surface treatment. JP '124 instead discloses the planarization of overlapping color filter portions. It is not concerned with surface irregularities caused by holes in the color filter. It therefore does not suggest to one skill in the art to modify US '521 with its planarization process.

In view of the foregoing, it is clear that US '521 and JP '124 do not contain any suggestion (express or implied) that they be combined, or that they be combined in the manner suggested. Each cited reference is complete and functional in itself, so there would be no reason to use steps, parts or structures from, or add or substitute steps, parts or structures to another reference. Further, the references take mutually exclusive paths and reach different solutions to different problems (US '521 specifically chose to use resin filler or flattening film to fill color filter openings to achieve surface flatness, but JP '124 removes overlapping color filter portions. The references effectively teach away (expressly or by implication) from the combination suggested by the Examiner. In fact, US '521 expressly teaches away from requiring any further